

Serial No. 10/729,265

Docket No. 95,868

IN THE CLAIMS:

1. (CURRENTLY AMENDED) A solar distillation loop apparatus, comprising:
an evaporation section comprising a first pipe section disposed on a ground surface, the first pipe section including a substantially straight portion and elevated portions on each end of the substantially straight portion, an impure water inflow coupling at one end of the straight portion, and an impure water outflow coupling at the other end of the straight portion, wherein solar energy heats the substantially straight portion to evaporate impure water therein;
solar powered fans disposed in each of the elevated portions of the first pipe section;
and
a condensation section comprising a second pipe section and two substantially vertical pipe sections, the a-second pipe section being disposed under the ground surface beneath the first pipe section; and, and the two substantially vertical pipe sections that connect connecting
respective ends of the second pipe section to respective ends of the first pipe section.
2. (ORIGINAL) The apparatus of claim 1 wherein the second pipe section is perforated.
3. (CURRENTLY AMENDED) The apparatus of claim 1, wherein the second pipe section includes ~~a pure water~~ an outflow connection to remove water formed by condensation in the condensation section.
4. (ORIGINAL) The apparatus of claim 1 wherein a color of the substantially straight portion of the first pipe section is black.
5. (ORIGINAL) The apparatus of claim 1 wherein a cross-section of the substantially straight portion of the first pipe section is circular.
6. (ORIGINAL) The apparatus of claim 1 wherein a cross-section of the substantially straight portion of the first pipe section is substantially elliptical, with a major axis of the cross-section generally parallel to the ground surface.

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7. (CURRENTLY AMENDED) The apparatus of claim 1, wherein a material of the first pipe section, the second pipe section, and the two substantially vertical pipe sections comprises ABS acrylonitrile butadiene styrene (ABS) plastic.

8. (CURRENTLY AMENDED) The apparatus of claim 1, wherein a material of the first pipe section, the second pipe section, and the two substantially vertical pipe sections comprises PVC polyvinyl chloride (PVC).

9. (ORIGINAL) The apparatus of claim 1 further comprising solar panels connected to each of the solar powered fans.

10. (CURRENTLY AMENDED) ~~The apparatus of claim 4~~ A solar distillation loop apparatus, comprising:

an evaporation section comprising a first pipe section disposed on a ground surface, the first pipe section including a substantially straight portion and elevated portions on each end of the substantially straight portion, an impure water inflow coupling at one end of the straight portion, and an impure water outflow coupling at the other end of the straight portion, wherein solar energy heats the substantially straight portion to evaporate impure water therein;

solar powered fans disposed in each of the elevated portions of the first pipe section;
and

a condensation section comprising a second pipe section and two substantially vertical pipe sections, the second pipe section being disposed under the ground surface beneath the first pipe section, and the two substantially vertical pipe sections connecting respective ends of the second pipe section to respective ends of the first pipe section,

wherein the second pipe section is disposed under the ground surface at a depth of about one to about three meters.

11. (CURRENTLY AMENDED) ~~The apparatus of claim 2~~ A solar distillation loop apparatus, comprising:

an evaporation section comprising a first pipe section disposed on a ground surface, the first pipe section including a substantially straight portion and elevated portions on each end of the substantially straight portion, an impure water inflow coupling at one end of the straight

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portion, and an impure water outflow coupling at the other end of the straight portion, wherein solar energy heats the substantially straight portion to evaporate impure water therein;

solar powered fans disposed in each of the elevated portions of the first pipe section;
and

a condensation section comprising a second pipe section and two substantially vertical pipe sections, the second pipe section being disposed under the ground surface beneath the first pipe section, and the two substantially vertical pipe sections connecting respective ends of the second pipe section to respective ends of the first pipe section,

wherein the second pipe section is perforated and lower portions of the two substantially vertical pipe sections are perforated.

12. (CURRENTLY AMENDED) A method of producing ~~pure distilled~~ water using ~~the apparatus of claim 1~~ a solar distillation loop, comprising:

providing a first pipe section disposed on a ground surface, the first pipe section including a substantially straight portion and elevated portions on each end of the substantially straight portion, an impure water inflow coupling at one end of the straight portion, and an impure water outflow coupling at the other end of the straight portion;

providing solar powered fans disposed in each of the elevated portions of the first pipe section;

providing a second pipe section disposed under the ground surface beneath the first pipe section;

providing two substantially vertical pipe sections connecting respective ends of the second pipe section to respective ends of the first pipe section;

providing impure water to the first pipe section via the impure water inflow coupling and removing impure water from the first pipe section via the impure water outflow coupling;

evaporating water from the impure water in the substantially straight portion of the first pipe section by solar energy heating the substantially straight portion;

using the solar powered fans, moving the evaporated water from the first pipe section to the second pipe section; and

condensing the evaporated water in the second pipe section.

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13. (ORIGINAL) The method of claim 12 wherein the second pipe section is perforated, the method further comprising absorbing the condensed water in soil surrounding the second pipe section.

14. (CURRENTLY AMENDED) The method of claim 12, wherein the second pipe section ~~includes a pure water~~ comprises an outflow connection, the method further comprising removing the condensed water from the second pipe section via the ~~pure water~~ outflow connection.